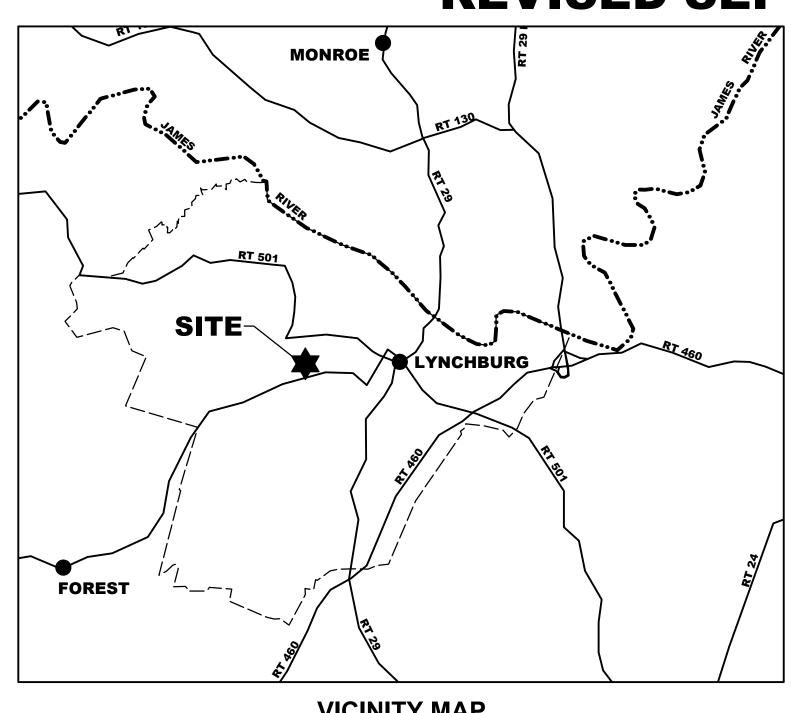
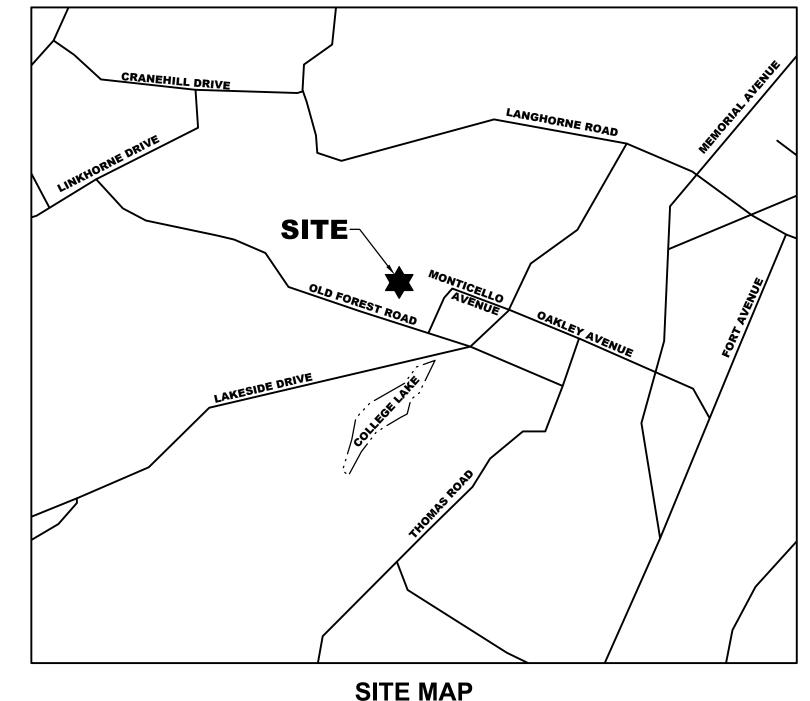
MAY 2, 2014 REVISED SEPTEMBER 2, 2014





SCALE: 1" = 2000'

VICINITY MAP

SCALE: 1" = 2 MI

GENERAL NOTES:

- 1. EXISTING UTILITIES ARE SHOWN AT APPROXIMATE LOCATIONS. CONTRACTOR IS RESPONSIBLE FOR VERIFYING EXACT LOCATION AND DEPTHS PRIOR TO LAYING PIPE.
- 2. THE CONTRACTOR SHALL CONTACT MISS UTILITY, THE CITY ENVIRONMENTAL REVIEWER AND THE CITY'S CONSTRUCTION COORDINATOR AT LEAST 48 HOURS PRIOR TO EXCAVATION.
- 3. ALL WORK ON THIS PROJECT SHALL CONFORM TO THE LATEST EDITIONS OF THE CITY OF LYNCHBURG MANUAL OF SPECIFICATIONS AND STANDARD DETAILS. THE VIRGINIA DEPARTMENT OF TRANSPORTATION (VDOT) ROAD AND BRIDGE SPECIFICATIONS AND ROAD AND BRIDGE STANDARDS. THE VIRGINIA EROSION AND SEDIMENT CONTROL REGULATIONS, AND ANY OTHER STATE, FEDERAL, OR LOCAL REGULATIONS APPLICABLE. IN THE EVENT OF CONFLICT BETWEEN ANY OF THESE STANDARDS. SPECIFICATIONS OR PLANS. THE MOST STRINGENT SHALL GOVERN
- THE CONTRACTOR SHALL BE FULL LIABLE FOR ANY DAMAGES TO PUBLIC OR PRIVATE PROPERTY CAUSED BY CONSTRUCTION
- OPERATION AND SHALL RESTORE DAMAGED PROPERTY TO EXISTING OR BETTER CONDITION AT NO ADDITIONAL COST TO OWNER. 5. ALL AREAS DISTURBED BY CONSTRUCTION SHALL BE SEEDED AND PROTECTED WITH EROSION CONTROL PRACTICES.
- 6. VEGETATIVE AND STRUCTURAL EROSION AND SEDIMENT CONTROL DEVICES SHALL BE CONSTRUCTED AND MAINTAINED FOR ALL DISTURBED AREAS IN ACCORDANCE WITH ALL LOCAL REQUIREMENTS AND THE LATEST EDITION OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK. ALL EROSION AND SEDIMENT CONTROL DEVICES SHALL BE INSTALLED BEFORE EXCAVATION BEGINS.
- 7. THE CONTRACTOR SHALL REPLACE ALL DISTURBED SURFACES IN KIND, INCLUDING PAVEMENT, STONE, DITCHES, MAILBOXES, SHRUBS
- 8. ALL PROPERTY PINS DISTURBED DURING CONSTRUCTION SHALL BE REPLACED BY A CERTIFIED LAND SURVEYOR.
- 9. THE CONTRACTOR SHALL COMPLY WITH ALL FEDERAL, STATE, AND LOCAL CONFINED SPACE ENTRY REGULATIONS.
- 10. MAINTAIN OVERHEAD AND UNDERGROUND ELECTRICAL, TELEPHONE, SANITARY, AND GAS SERVICES AND ALL OTHER UNDERGROUND UTILITIES DURING ENTIRE CONSTRUCTION PERIOD. OUTAGES WILL NOT BE ALLOWED.
- 11. TOTAL DISTURBED AREA WILL BE 3.56 ACRES. PRIOR TO START OF CONSTRUCTION, THE CONTRACTOR SHALL CONTACT THE VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY TO OBTAIN A STORMWATER VSMP PERMIT FOR CONSTRUCTION ACTIVITIES. UPON RECEIPT OF THE VSMP PERMIT REGISTRATION STATEMENT, THE APPLICANT IS TO SUBMIT A COPY TO THE ENVIRONMENTAL REVIEWER.
- 12. A LAND DISTURBANCE PERMIT WILL BE REQUIRED FOR THIS PROJECT.
- 13. CONTRACTOR SHALL BE INFORMED AND SHALL COMPLY WITH THE VIRGINIA OVERHEAD HIGH VOLTAGE LINE SAFETY ACT. ANY COSTS TO COVER LINES OR DISCONNECT SERVICE TO NEARBY POWER LINES SHALL BE AT THE CONTRACTOR'S EXPENSE. CONTRACTOR SHALL RETAIN FULL LIABILITY FOR COMPLIANCE WITH OSHA REGULATIONS AND THE SAFETY ACT. THE CONTRACTOR SHALL BEAR EXPENSE FOR POLE SUPPORT WHERE REQUIRED.
- 14. ALL EXISTING UNDERGROUND UTILITY LOCATIONS AS SHOWN ON THESE PLANS ARE APPROXIMATE AND MAY NOT REPRESENT ALL UNDERGROUND UTILITIES OR SERVICE LINES. CONTRACTOR IS RESPONSIBLE FOR VERIFYING EXACT LOCATION, DEPTH, SIZE, AND TYPE OF UTILITIES SHOWN AND NOTIFYING ENGINEER OF DISCREPANCIES. PRIOR TO EXCAVATION, THE CONTRACTOR SHALL CONTACT THE PERTINENT UTILITY COMPANIES AND/OR UTILITY LOCATING SERVICES TO HAVE ALL UNDERGROUND UTILITIES LOCATED AND MARKED. CONTRACTOR IS SOLELY RESPONSIBLE FOR DAMAGE TO PROPERTY, UTILITIES, OR PHYSICAL IMPROVEMENTS.
- 15. ZONING OF CITY PROPERTY IS R-2 AND R-C (ALONG BLACKWATER CREEK). THE CLOSEST ADJACENT PROPERTY IS RESIDENTIAL, ID 01500200, 525 MONTICFELLO AVE, ZONED R-2 AN OWNED BY BRITTANY & BENJAMIN WHITTACKER.

SHEET LIST TABLE

	Sheet Number	Sheet Title		
<u> </u>	G-001	COVER SHEET		
	C-101	EXISTING CONDITIONS & DEMOLITION PLAN		
<u> </u>	C-102	EROSION & SEDIMENT CONTROL PLAN		
Δ	C-103	SITE PLAN		
	C-104	SITE GRADING		
	C-105	UTILITY PLAN		
	C-106	IRRIGATION PLAN		
	C-301	EROSION & SEDIMENT CONTROL DETAILS		
	C-302	SITE IMPROVEMENT DETAILS		
\triangle	C-401	EROSION & SEDIMENT CONTROL NARRATIVE		
	C-501	STORMWATER MANAGEMENT SUMMARY		

OWNER INFORMATION:

CITY OF LYNCHBURG CONTACT: ANDREW READER PARKS & RECREATION 301GROVE STREET

LYNCHBURG, VA 24501 PHONE: (434) 455-5876 EMAIL: andrew.reader@lynchburgva.gov

ENGINEER INFORMATION:

WILEY|WILSON ENGINEER: 127 NATIONWIDE DRIVE LYNCHBURG, VA 24502

CONTACT: DANIEL T. SUTTON, PE PHONE: (804) 200-1703 dsutton@wileywilson.com

WILL BE DONE PURSUANT TO THIS PLAN AND THAT THE APPLICABLE STORMWATER MANAGEMENT CONDITIONS AND REQUIREMENTS OF THE CITY OF LYNCHBURG, THE COMMONWEALTH OF VIRGINIA AND THE FEDERAL GOVERNMENT AND ITS AGENCIES ARE HEREBY MADE PART OF THIS PLAN."

"I/WE HEREBY CERTIFY THAT ALL SITE CONSTRUCTION, DRAINAGE AND GRADING

REGISTRATION NUMBER: 45799

__ DATE: <u>6/13/14</u>

"I HEREBY CERTIFY THAT, TO THE BEST OF MY ABILITY, THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE LATEST CITY OF LYNCHBURG MANUAL OF

SPECIFICATIONS AND STANDARD DETAILS AND CITY CODE."

PRINTED NAME AND TITLE: DAN SUTTON

PRINTED NAME AND TITLE: CITY ENGINEER:

PROJECT NAME: BLACKWATER CREEK ATHLETIC AREA MULTIPURPOSE FIELD PARCEL ID 01502025

IMPERVIOUS AREA STATISTICS

EXISTING IMPERVIOUS AREA = 0.12 ACRES PROPOSED IMPERVIOUS AREA = -0.06 ACRES TOTAL POST IMERVIOUS AREA = 0.06 ACRES

IT IS ANTICIPATED THAT THE PLANNED IMPROVEMENT WILL PRODUCE 0 C.Y. OF EXCESS MATERIAL. IF ADDITIONAL MATERIAL IS ENCOUNTERED, A PLAN ADDENDUM WILL BE REQUIRED, IDENTIFYING THE LOCATION, ADEQUATE STABILIZATION MEASURES AND AN APPROVED PERMIT FOR ANY OFF SITE BORROW/FILL/WASTE SITE(S) THAT WILL BE USED IN CONJUNCTION WITH THIS PROJECT. THE ULTIMATE DESTINATION OF ALL **DEBRIS FROM DEMOLITION MUST BE IDENTIFIED AT THE** PRE CONSTRUCTION CONFERENCE.

Wiley | Wilson Constant Progress



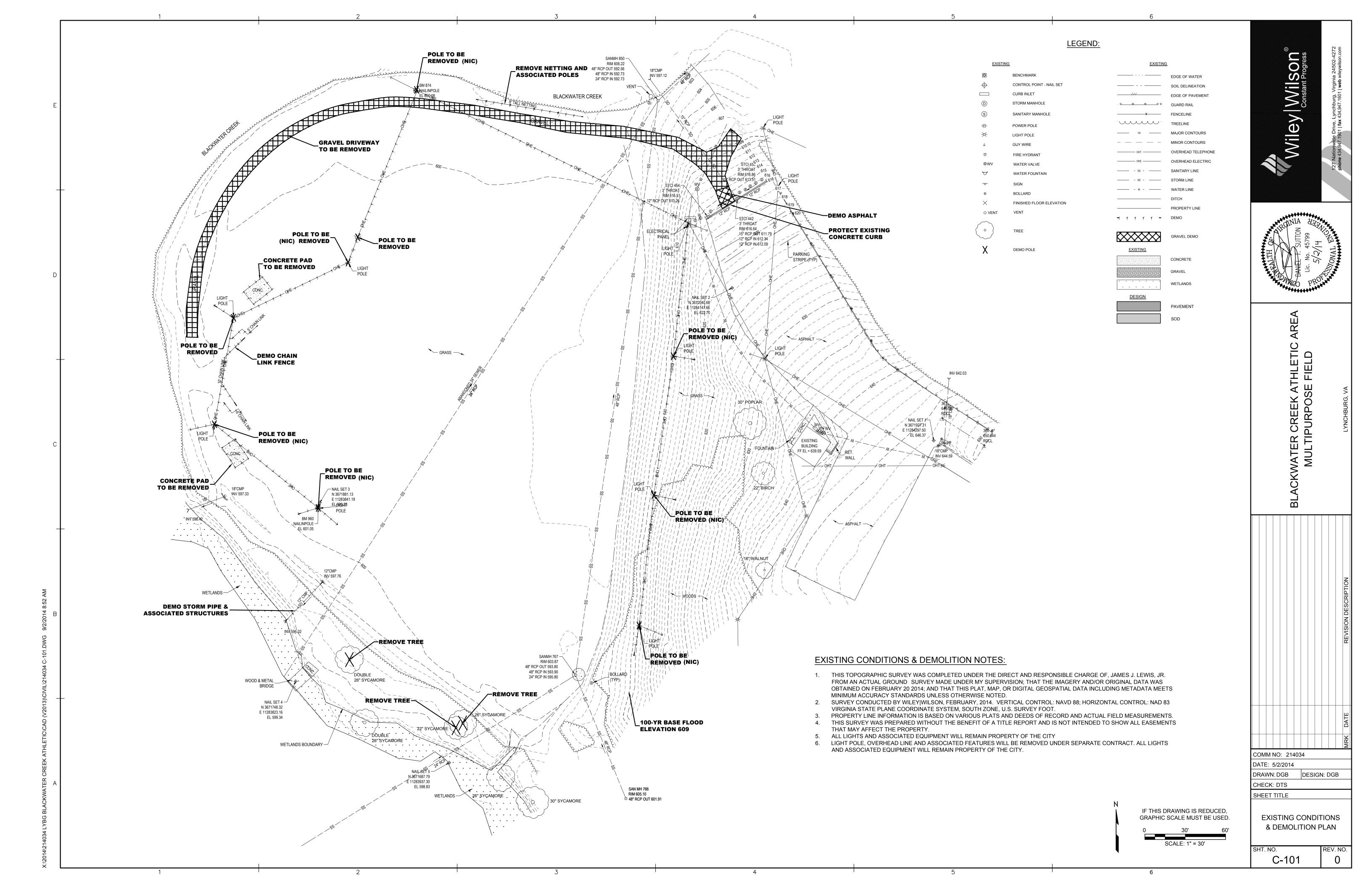
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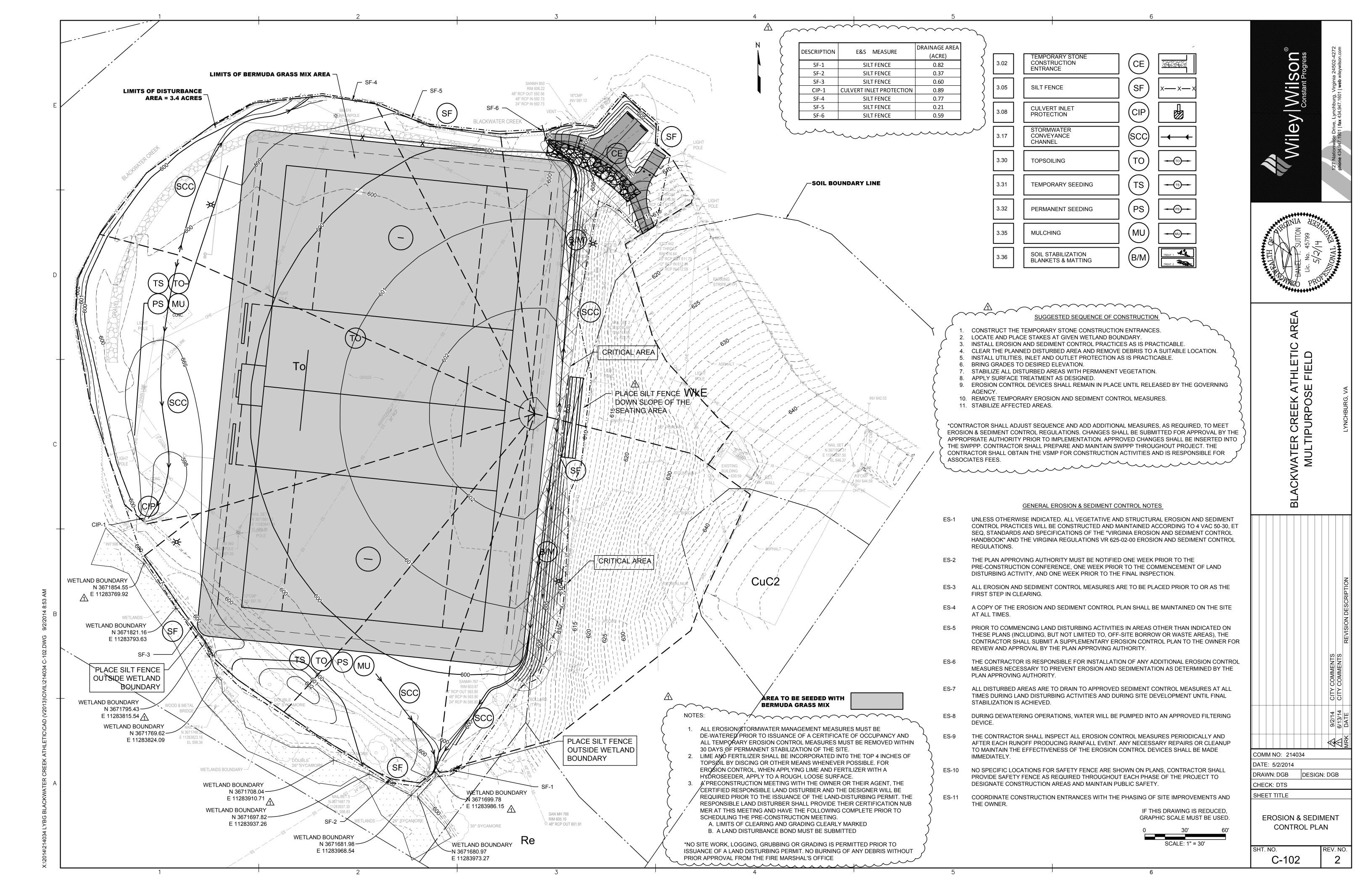
G-001

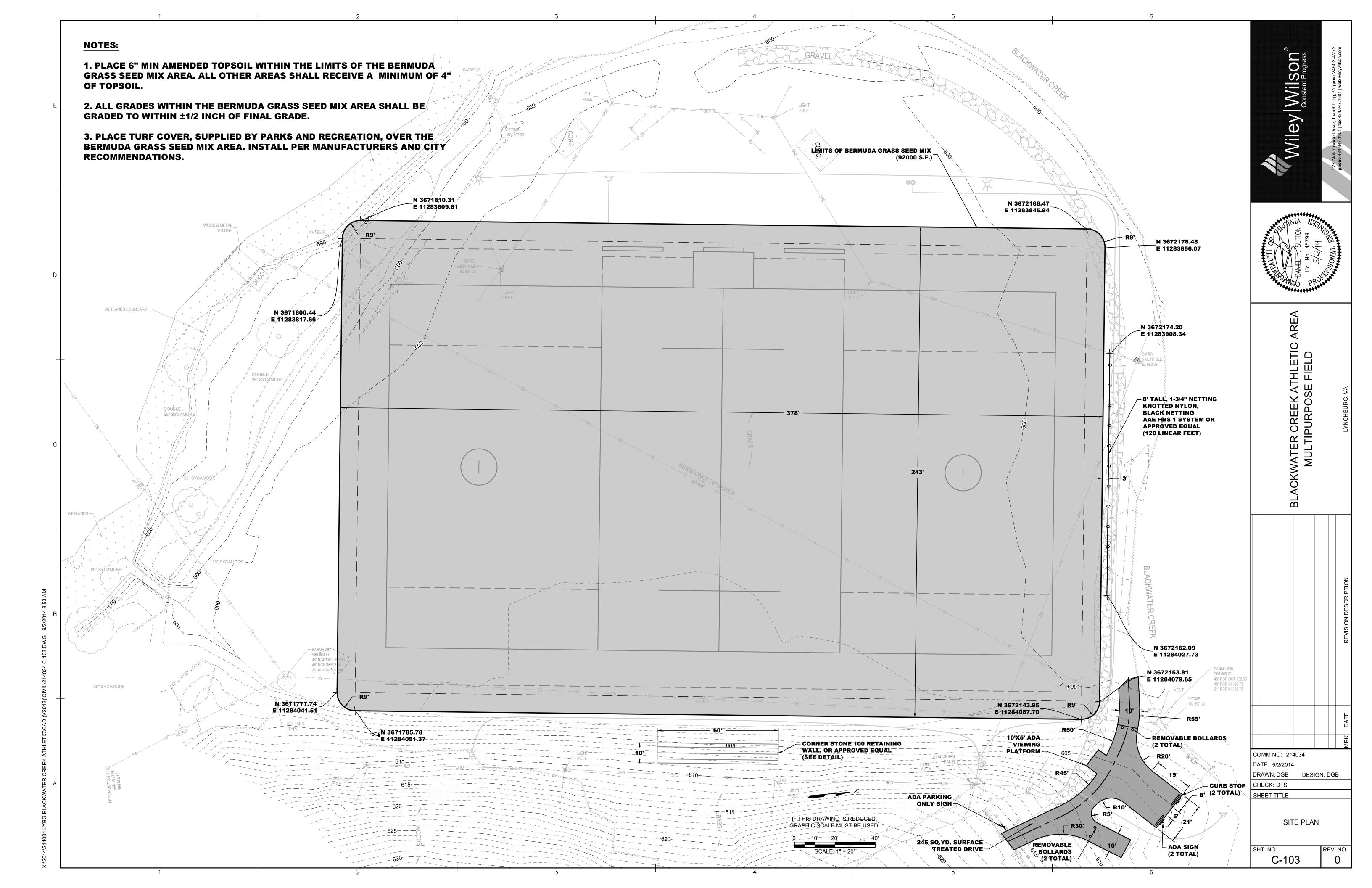
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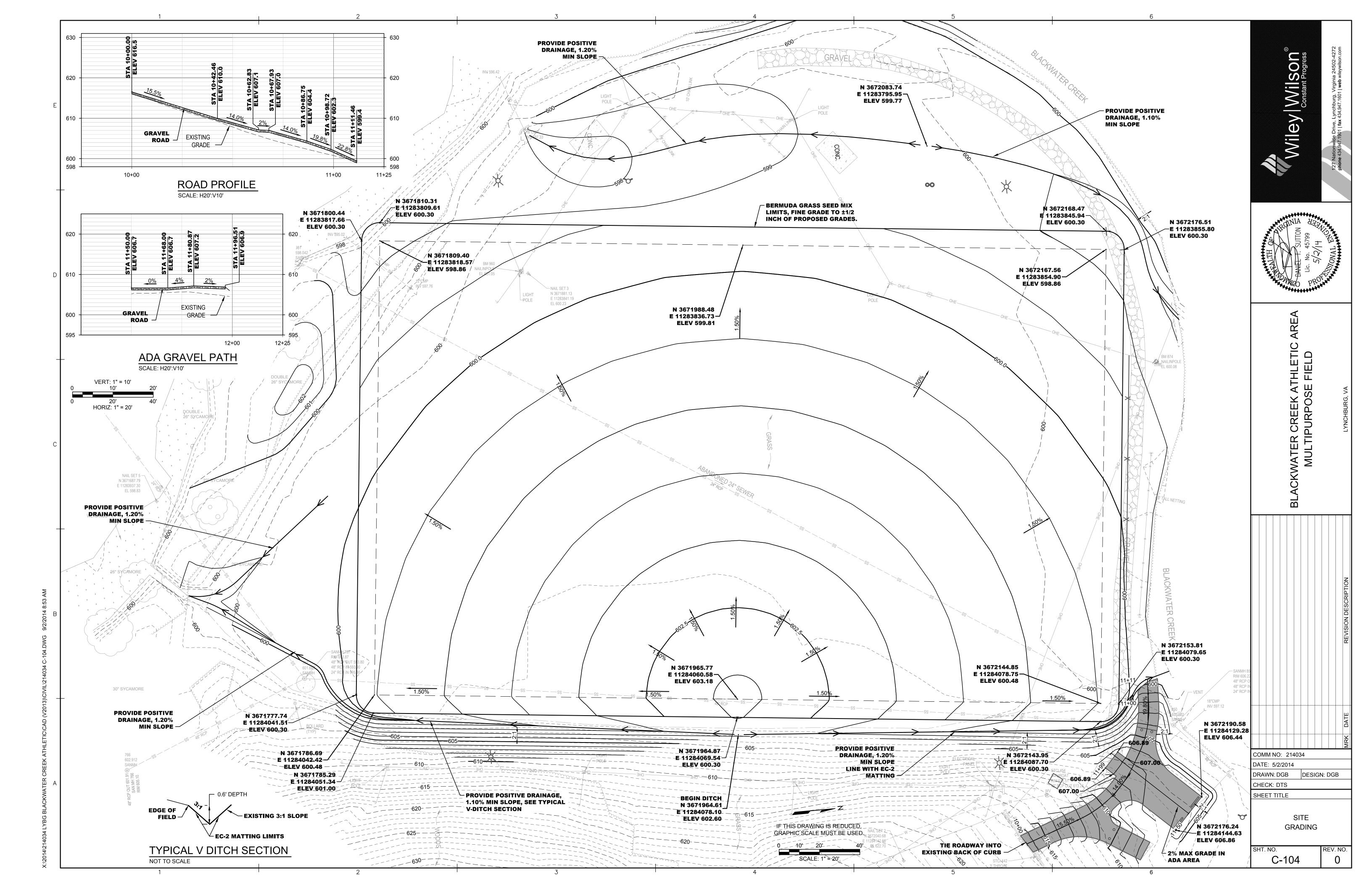
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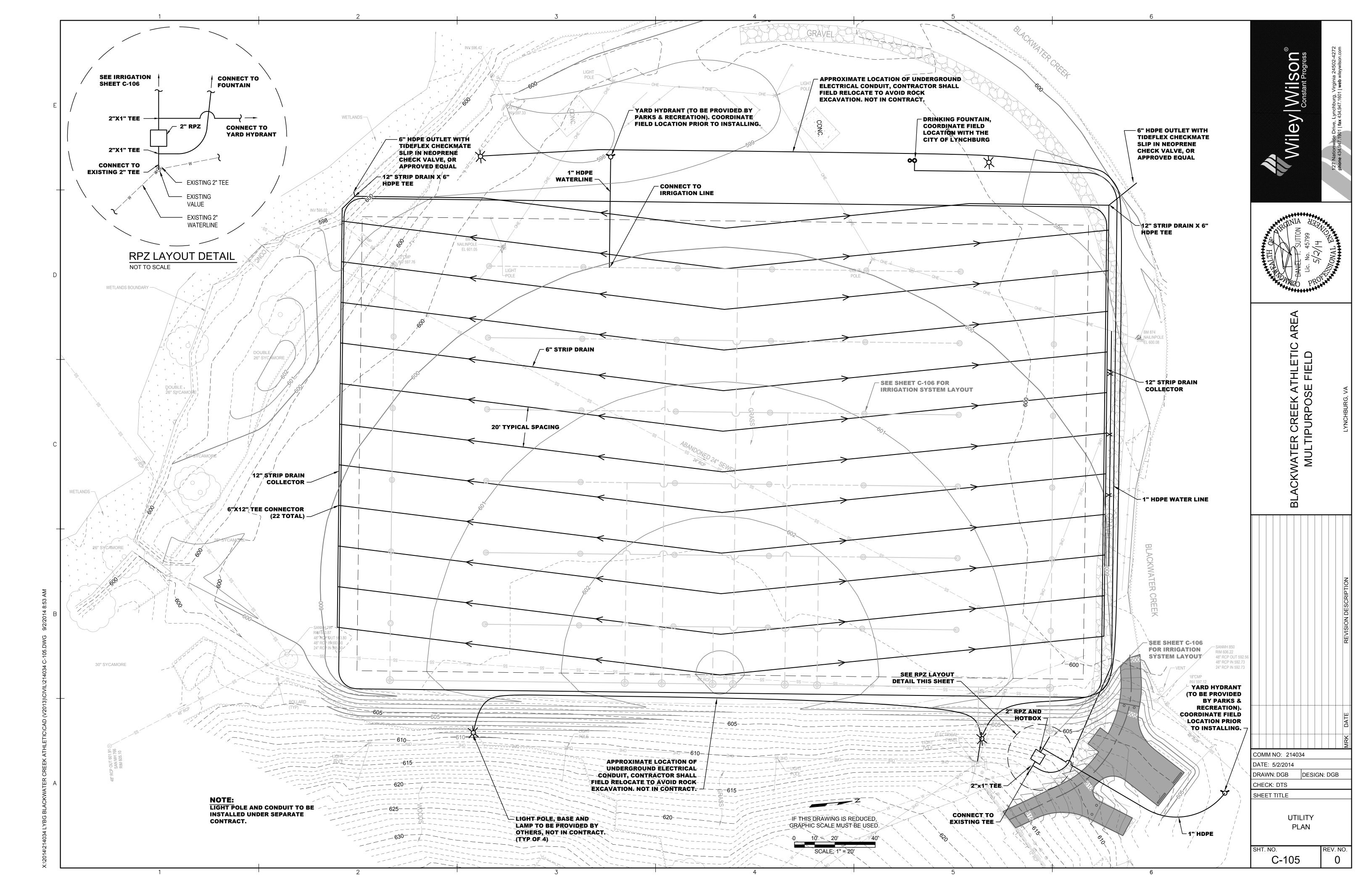
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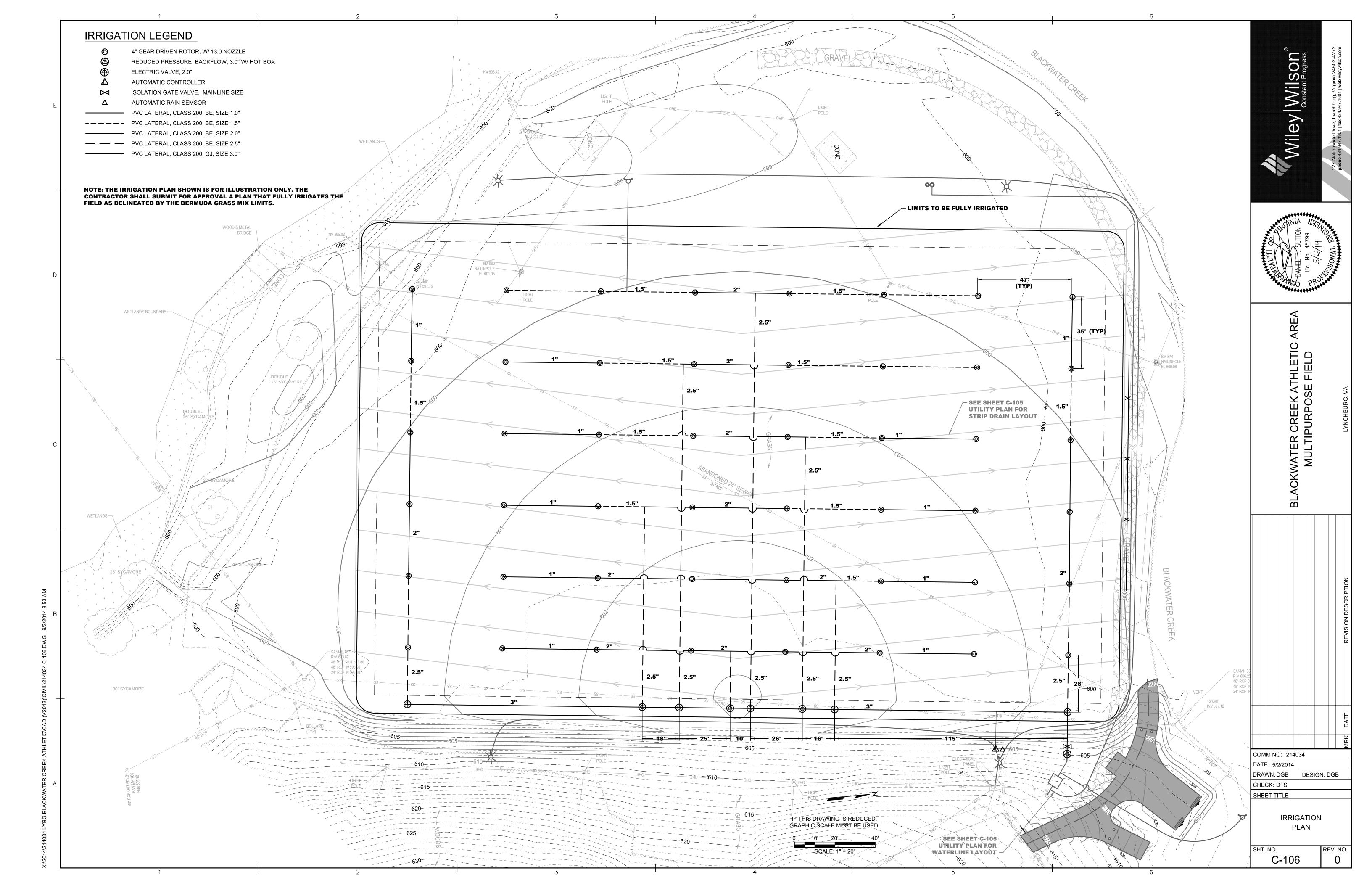




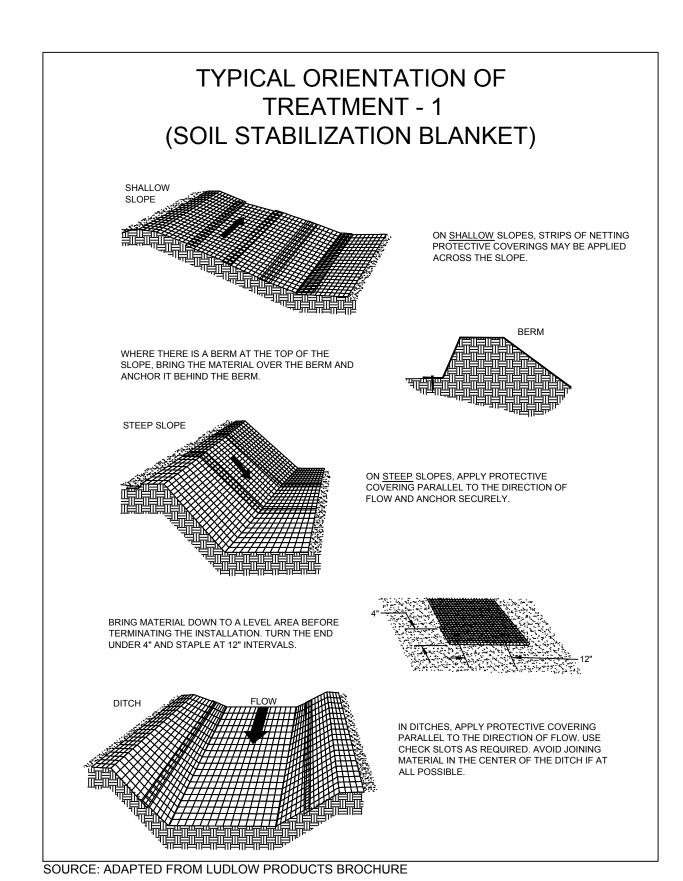


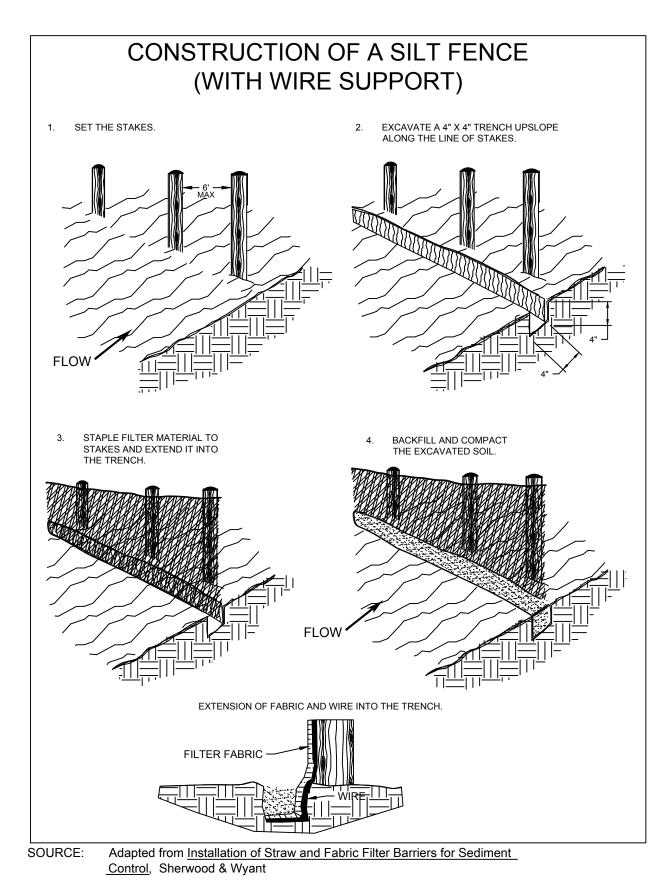




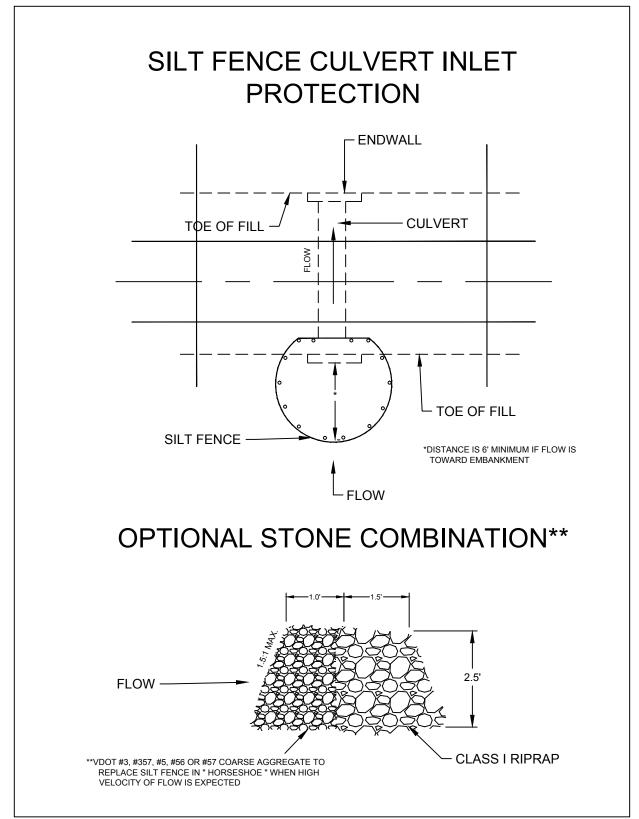












SOURCE: ADAPTED from VDOT Standard Sheets and Va. DSWC



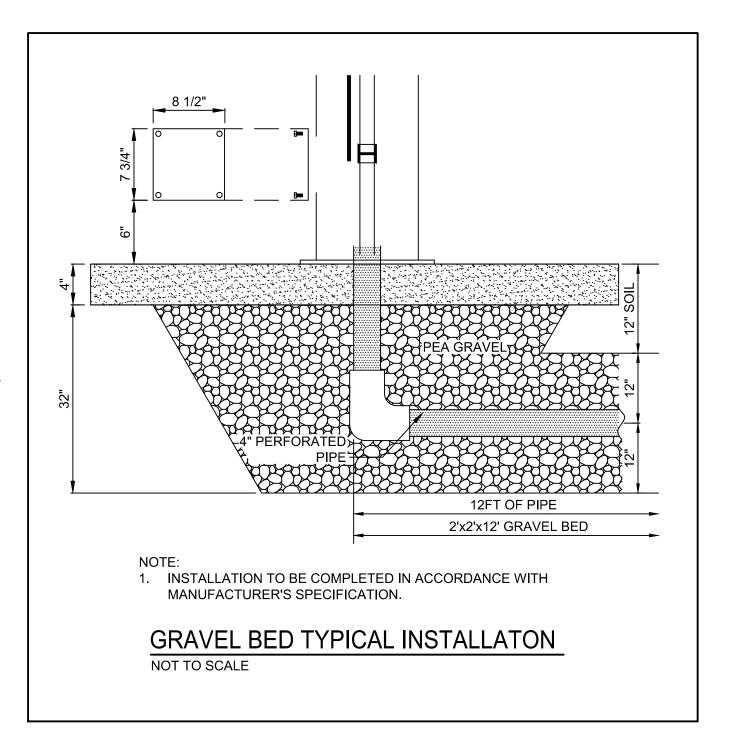
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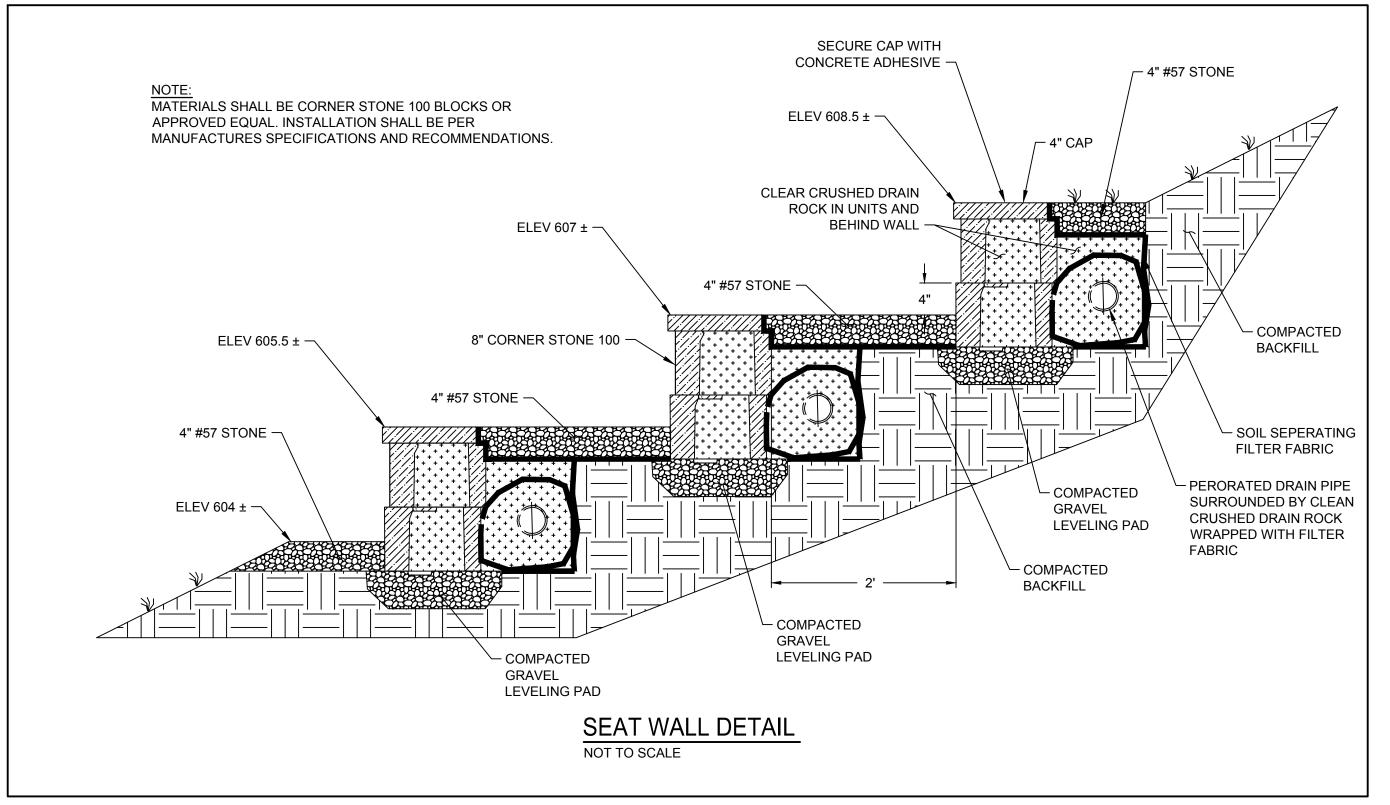


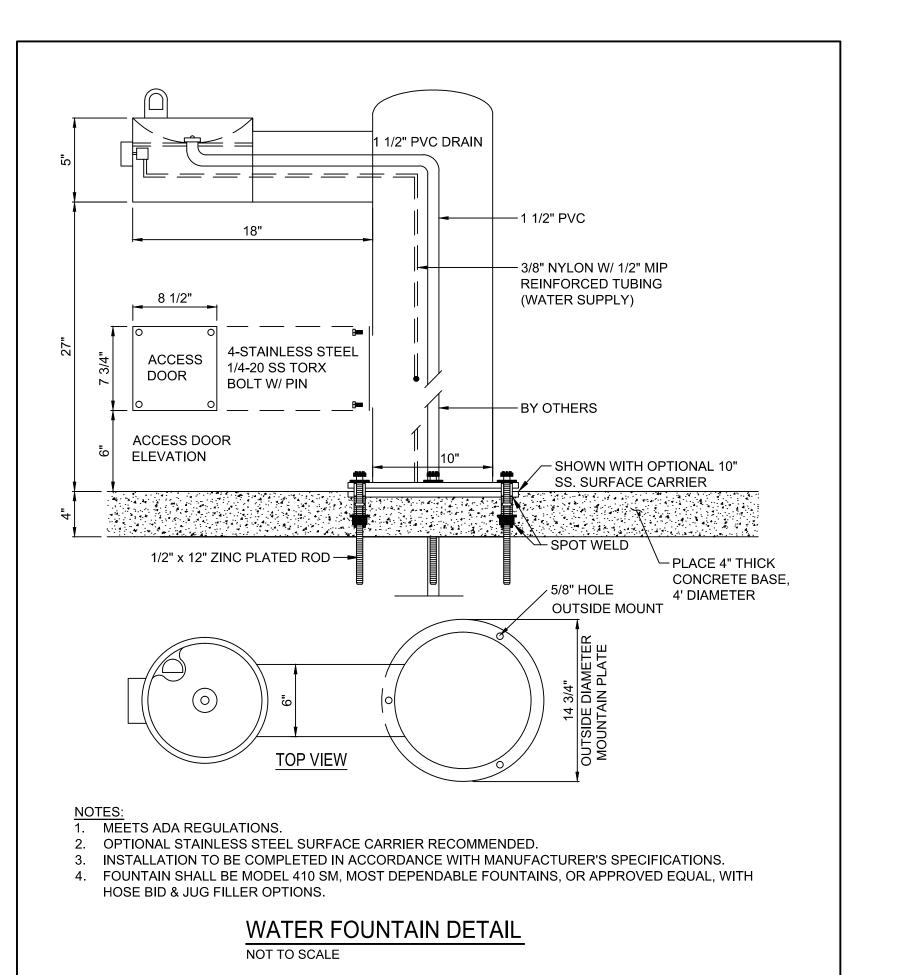
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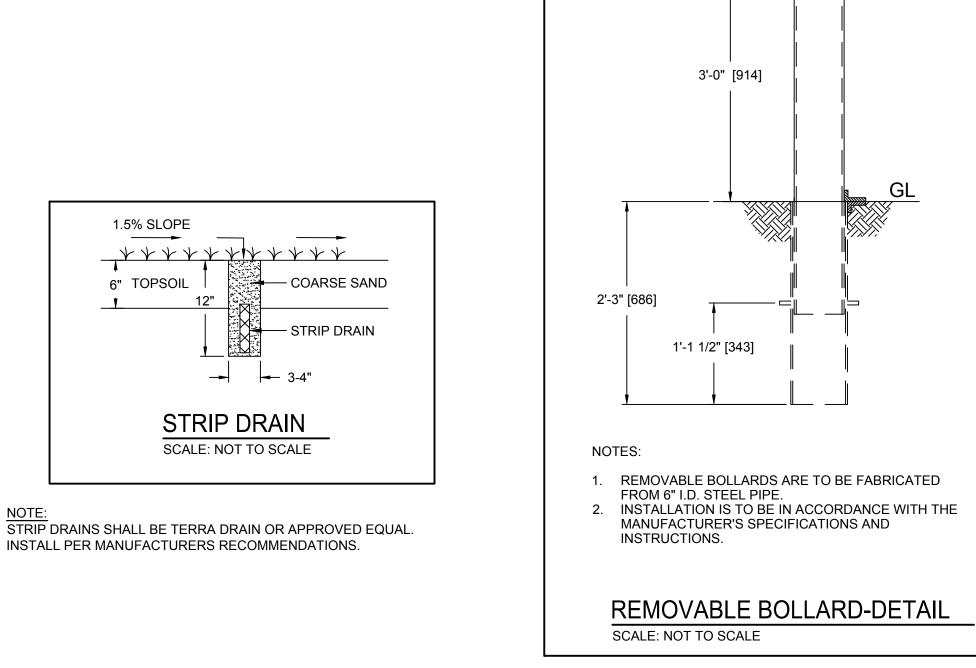
SOIL STABILIZATION BLANKETS & MATTING
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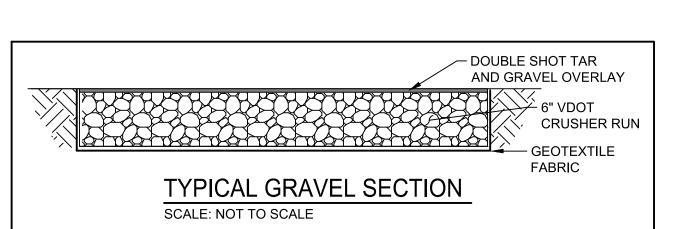
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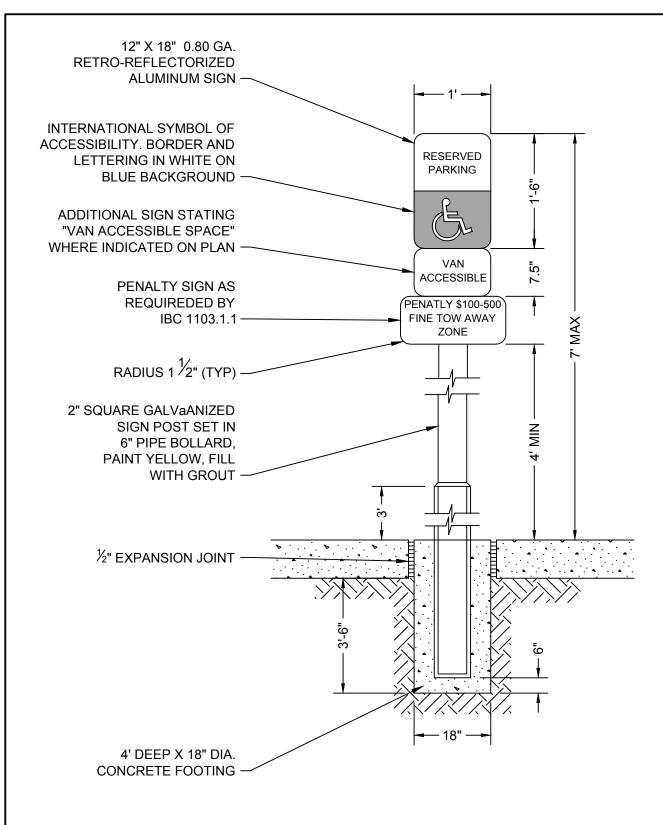










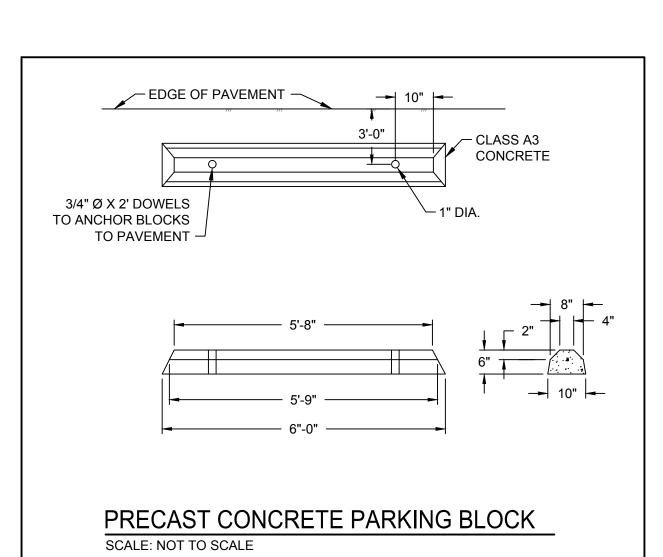


1. HANGING ORDER OF THE VAN ACCESSIBLE SPACE AND PENALTY SIGN DOES NOT MATER.

THE VAN ACCESSIBLE SIGN IN NOT REQUIREDED BY CODE AND SHALL ONLY BE HUNG WHEN INDICATED ON THE PLAN.

HANDICAP PARKING SIGNAGE

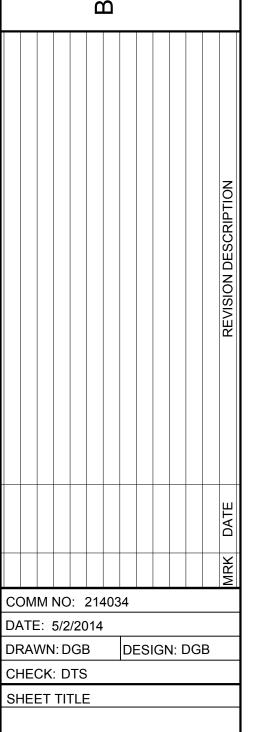
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X ATHLETIC , SE FIELD CKWATER CREEK MULTIPURPOS



SITE IMPROVEMENT

DETAILS

REV. NO.

C-302

THIS PROJECT INVOLVES THE SODDING, LIGHTING AND ADDITION OF UNDERDRAINS TO AN EXISTING MULTIPURPOSE ATHLETIC FIELD. ADJACENT TO THE MULTIPURPOSE FIELD WILL BE CONSTRUCTION OF A NEW ADA PARKING AREA WITH ACCESS FROM THE EXISTING PARKING LOT AND THREE ROWS OF SEAT WALLS WILL BE ADDED TO THE BANK. EROSION AND SEDIMENT CONTROL MEASURES HAVE BEEN INCLUDED TO PREVENT EROSION AND TRAP SEDIMENT ON SITE. THE PROJECT INVOLVES APPROXIMATELY 3.56 ACRES OF LAND DISTURBANCE. THE LENGTH OF CONSTRUCTION IS ESTIMATED TO BE 3 MONTHS. THE TOTAL EXISTING IMPERVIOUS AREA IS 0.12 ACRES, THE TOTAL PROPOSED IMPERVIOUS AREA IS 0.06 ACRES, A REDUCTION OF 0.06 ACRES. THE POST CONSTRUCTION IMPERVIOUS PERCENTAGE IS 1.7% WHICH IS LESS THAN THE AVERAGE OF 16%, THEREFORE IS FALLS UNDER SITUATION 1 AND NO POST CONSTRUCTION STORMWATER MANAGEMENT FOR QUALITY IS REQUIRED. THE PRE AND POST PEAK FLOWS REMAIN UNCHANGED.

PERMANENT STABILIZATION WILL BE SOD ON THE PLAYING FIELD, GRASS ON ALL OTHER OPEN AREAS AND ASPHALT ON THE TWO ADA PARKING SPACES. I. EXISTING SITE CONDITIONS

THE SITE CONSISTS OF AN EXISTING GRASS ATHLETIC FIELD BORDERED ON THE NORTH AND WEST BY BLACKWATER CREEK. TO THE EAST IS AN EXISTING ASPHALT PARKING LOT AND RESTROOM FACILITY. THE SOUTH SIDE OF THE PROJECT ARE INCLUDES THICK BAMBOO AND AN OXBOW AREA OF BLACKWATER CREEK DELINEATED AS WETLANDS.

III. ADJACENT PROPERTIES

THE PROJECT IS BOUND BY BLACKWATER CREEK TO THE NORTH AND WEST AS WELL AS A FENCED DOG PARK TO THE NORTHEAST. TO THE. TO THE SOUTH AND EAST ARE RESIDENTIAL NEIGHBORHOODS WITH MIXED SINGLE AND MULTIFAMILY DWELLINGS.

IV. OFF-SITE AREAS

FILL MATERIAL WILL BE OBTAINED FROM AREAS OF EXCAVATION CONTAINED WITHIN THE SITE. UNSUITABLE MATERIAL WILL BE HAULED FROM THE SITE AND DISPOSED OF IN AN APPROVED MANNER. THE CONTRACTOR SHALL SUBMIT A SUPPLEMENTARY EROSION AND SEDIMENT CONTROL PLAN TO THE EROSION AND SEDIMENT CONTROL REGULATOR PERTAINING TO OFF-SITE DISTURBED AREAS (IF ANY SUCH AREAS ARE REQUIRED) SUCH AS STOCKPILES, STAGING AREAS, AND SPOIL AREAS THAT ARE USED FOR THIS PROJECT.

ACCORDING TO USDA SCS SOIL MAPPING, THE PROJECT SITE LIES ON SOIL TYPES CULLEN, RIVERVIEW, TALLAPOOSA, TOCCOA, AND WILKES.

CUC2 - CULLEN LOAM, 6 TO 15 PERCENT SLOPES, ERODED

THIS SERIES IS ON HILLSLOPES ON PIEDMONTS. THE PARENT MATERIAL CONSISTS OF MIXED MAFIC RESIDUUM. DEPTH TO A ROOT RESTRICTIVE LAYER IS GREATER THAN 60 INCHES. THE NATURAL DRAINAGE CLASS IS WELL DRAINED. WATER MOVEMENT IN THE MOST RESTRICTIVE LAYER IS MODERATELY HIGH. AVAILABLE WATER TO A DEPTH OF 60 INCHES IS MODERATE. SHRINK-SWELL POTENTIAL IS MODERATE. THIS SOIL IS NOT FLOODED. IT IS NOT PONDED. THERE IS NO ZONE OF WATER SATURATION WITHIN A DEPTH OF 72 INCHES. ORGANIC MATTER CONTENT IN THE SURFACE HORIZON IS ABOUT 2 PERCENT. NONIRRIGATED LAND CAPABILITY CLASSIFICATION IS 3E. THIS SOIL DOES NOT MEET HYDRIC CRITERIA.

CUE2 - CULLEN LOAM, 15 TO 25 PERCENT SLOPES, ERODED

THIS SERIES IS ON HILLSLOPES ON PIEDMONTS. THE PARENT MATERIAL CONSISTS OF MIXED MAFIC RESIDUUM. DEPTH TO A ROOT RESTRICTIVE LAYER IS GREATER THAN 60 INCHES. THE NATURAL DRAINAGE CLASS IS WELL DRAINED. WATER MOVEMENT IN THE MOST RESTRICTIVE LAYER IS MODERATELY HIGH. AVAILABLE WATER TO A DEPTH OF 60 INCHES IS MODERATE. SHRINK-SWELL POTENTIAL IS MODERATE. THIS SOIL IS NOT FLOODED. IT IS NOT PONDED. THERE IS NO ZONE OF WATER SATURATION WITHIN A DEPTH OF 72 INCHES, ORGANIC MATTER CONTENT IN THE SURFACE HORIZON IS ABOUT 2 PERCENT, NONIRRIGATED LAND CAPABILITY CLASSIFICATION IS 4E. THIS SOIL DOES NOT MEET HYDRIC CRITERIA

THIS SERIES IS ON FLOOD PLAINS ON PIEDMONTS. THE PARENT MATERIAL CONSISTS OF ALLUVIUM. DEPTH TO A ROOT RESTRICTIVE LAYER IS GREATER THAN 60 INCHES. THE NATURAL DRAINAGE CLASS IS WELL DRAINED. WATER MOVEMENT IN THE MOST RESTRICTIVE LAYER IS MODERATELY HIGH. AVAILABLE WATER TO A DEPTH OF 60 INCHES IS HIGH. SHRINK-SWELL POTENTIAL IS LOW. THIS SOIL IS FREQUENTLY FLOODED. IT IS NOT PONDED. A SEASONAL ZONE OF WATER SATURATION IS AT 48 INCHES DURING JANUARY, FEBRUARY, MARCH, DECEMBER. ORGANIC MATTER CONTENT IN THE SURFACE HORIZON IS ABOUT 1 PERCENT. NONIRRIGATED LAND CAPABILITY CLASSIFICATION IS 4W. THIS SOIL DOES NOT MEET HYDRIC CRITERIA.

TAE - TALLAPOOSA LOAM, 15 TO 25 PERCENT SLOPES THIS COMPONENT IS ON HILLSLOPES ON PIEDMONTS. THE PARENT MATERIAL CONSISTS OF RESIDUUM WEATHERED FROM MICA SCHIST. DEPTH TO A ROOT RESTRICTIVE LAYER, BEDROCK, PARALITHIC, IS 20 TO 60 INCHES. THE NATURAL DRAINAGE CLASS IS WELL DRAINED. WATER MOVEMENT IN THE MOST RESTRICTIVE LAYER IS MODERATELY HIGH. AVAILABLE WATER TO A DEPTH OF 60 INCHES IS LOW. SHRINKSWELL POTENTIAL IS LOW. THIS SOIL IS NOT FLOODED. IT IS NOT PONDED. THERE IS NO ZONE OF WATER SATURATION WITHIN A DEPTH OF 72 INCHES. ORGANIC MATTER CONTENT IN THE SURFACE HORIZON IS ABOUT 1 PERCENT. NONIRRIGATED LAND CAPABILITY CLASSIFICATION IS 7E. THIS SOIL DOES NOT MEET HYDRIC CRITERIA.

TO - TOCCOA FINE SANDY LOAM

THIS SERIES IS ON FLOOD PLAINS ON PIEDMONTS. THE PARENT MATERIAL CONSISTS OF ALLUVIUM. DEPTH TO A ROOT RESTRICTIVE LAYER IS GREATER THAN 60 INCHES. THE NATURAL DRAINAGE CLASS IS WELL DRAINED. WATER MOVEMENT IN THE MOST RESTRICTIVE LAYER IS MODERATELY HIGH. AVAILABLE WATER TO A DEPTH OF 60 INCHES IS MODERATE. SHRINK-SWELL POTENTIAL IS LOW. THIS SOIL IS FREQUENTLY FLOODED. IT IS NOT PONDED. A SEASONAL ZONE OF WATER SATURATION IS AT 45 INCHES DURING JANUARY, FEBRUARY, MARCH, APRIL, DECEMBER, ORGANIC MATTER CONTENT IN THE SURFACE HORIZON IS ABOUT 2 PERCENT. NONIRRIGATED LAND CAPABILITY CLASSIFICATION IS 3W. THIS SOIL DOES NOT MEET HYDRIC CRITERIA.

WKE - WILKES LOAM, 15 TO 25 PERCENT SLOPES

THIS SERIES IS ON HILLSLOPES ON PIEDMONTS. THE PARENT MATERIAL CONSISTS OF MIXED MAFIC RESIDUUM. DEPTH TO A ROOT RESTRICTIVE LAYER, BEDROCK, LITHIC, IS 20 TO 48 INCHES. THE NATURAL DRAINAGE CLASS IS WELL DRAINED. WATER MOVEMENT IN THE MOST RESTRICTIVE LAYER IS MODERATELY HIGH. AVAILABLE WATER TO A DEPTH OF 60 INCHES IS LOW. SHRINK-SWELL POTENTIAL IS LOW. THIS SOIL IS NOT FLOODED. IT IS NOT PONDED. THERE IS NO ZONE OF WATER SATURATION WITHIN A DEPTH OF 72 INCHES. ORGANIC MATTER CONTENT IN THE SURFACE HORIZON IS ABOUT 1 PERCENT. NONIRRIGATED LAND CAPABILITY CLASSIFICATION IS 7E. THIS SOIL DOES NOT MEET HYDRIC CRITERIA.

VI. CRITICAL AREAS

THERE ARE SEVERAL CRITICAL AREAS ADDRESSED BY THIS EROSION AND SEDIMENT CONTROL PLAN. THE EXISTING NATURAL CHANNEL DRAINING THE SMALL SPRING AND EXISTING STORM DRAINAGE IS LOCATED IN THE CENTER OF THE PROPOSED ATHLETIC FIELD. THE PROPOSED ATHLETIC FIELD SLOPES ARE SHAPED AT A 2:1 INCLINE. CARE WILL BE TAKEN TO PROVIDE PROTECTIVE MEASURES IN THESE AREAS TO ENSURE PROPER DRAINAGE OF THE SPRING AND TO STABILIZE THE SLOPES. SEDIMENT WILL BE TRAPPED ON SITE.

VII. EROSION AND SEDIMENT CONTROL MEASURE

ALL VEGETATIVE AND STRUCTURAL EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE CONSTRUCTED AND MAINTAINED BY THE CONTRACTOR IN ACCORDANCE WITH THE LATEST EDITION OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK. SYMBOLS, DETAILS, AND DIMENSIONS USED ARE TAKEN FROM THE HANDBOOK, AS WELL AS THE LATEST EDITION OF THE VIRGINIA DEPARTMENT OF TRANSPORTATION'S ROAD AND BRIDGE STANDARDS.

1. SAFETY FENCE (SAF), SPEC. 3.01: A SAFETY FENCE SHALL BE PROVIDED AS SHOWN ON THE PLANS TO PROHIBIT ACCESS BY THE PUBLIC. 2. TEMPORARY STONE CONSTRUCTION ENTRANCE (CE), SPEC. 3.02: A CONSTRUCTION ENTRANCE SHALL BE PROVIDED AS SHOWN ON THE PLANS AT THE EXISTING ROAD. EQUIPMENT WHEELS SHALL BE CLEAN WHEN ENTERING UPON A PAVED ROAD. ALL VEHICLES ENTERING AND EXITING THE PROJECT SITE

SHALL USE A CONSTRUCTION ENTRANCE 3. SILT FENCE (SF), SPEC. 3.05: SILT FENCE BARRIERS SHALL BE PROVIDED WHERE SHOWN AND AS NEEDED TO PREVENT SEDIMENT FROM LEAVING THE

4. STORM DRAIN INLET PROTECTION (IP), SPEC. 3.07: STORM DRAIN INLET PROTECTION SHALL BE PROVIDED FOR INLETS AS SHOWN ON THE PLANS. 5. CULVERT INLET PROTECTION (CIP), SPEC. 3.08: CULVERT INLET PROTECTION SHALL BE PROVIDED FOR THE CULVERTS AS SHOWN ON THE PLANS. 6. TEMPORARY DIVERSION DIKE (DD), SPEC. 3.09: TEMPORARY DIVERSION DIKES SHALL BE PROVIDED AS SHOWN OR AS NEEDED TO DIVERT

SEDIMENT-LADEN RUNOFF TOWARDS THE TEMPORARY SEDIMENT BASIN. 7. DIVERSION (DV), SPEC. 3.12: DIVERSIONS SHALL BE PROVIDED WHERE SHOWN AND AS NEEDED TO DIVERT STORMWATER RUNOFF 8. TEMPORARY SEDIMENT TRAP (ST), SPEC. 3.13: A TEMPORARY SEDIMENT TRAP SHALL BE PROVIDED ON THE SITE AS SHOWN ON THE PLANS. THE STORM WATER MANAGEMENT POND CULVERT SHALL BE PLUGGED WHILE TEMPORARY SEDIMENT TRAP IS IN USE TO PREVENT DISCHARGE FROM THE TRAP.

WHEN THE SITE HAS BEEN ADEQUATELY STABILIZED, THE TEMPORARY SEDIMENT TRAP SHALL BE CONVERTED INTO THE STORM WATER MANAGEMENT POND. POND EMBANKMENTS SHALL BE RE-GRADED AND RE-COMPACTED AS NECESSARY TO ENSURE STABILITY AND STRUCTURAL INTEGRITY.

9. STORM WATER CONVEYANCE CHANNEL (SCC), SPEC. 3.17: A CONVEYANCE CHANNEL SHALL BE PROVIDED AS SHOWN ON THE PLANS. THE CHANNEL SHALL BE CLEANED AFTER SITE STABILIZATION HAS OCCURRED.

10. OUTLET PROTECTION (OP), SPEC. 3.18: PROVIDE OUTLET PROTECTION FOR STORM WATER SYSTEM OUTLETS AS SHOWN ON THE PLANS. 11. LEVEL SPREADER (LS), SPEC. 3.21:

12. STRUCTURAL STREAMBANK STABILIZATION (SSS), SPEC. 3.23: PROVIDE STRUCTURAL STREAMBANK STABILIZATION AS SHOWN ON THE PLANS TO PROTECT STREAMBANKS FROM THE EROSIVE FORCES OF FLOWING WATER.

13. SOIL STABILIZATION BLANKETS AND MATTING (B/M), SPEC. 3.36: PROVIDE SOIL STABILIZATION BLANKETS AND MATTING ALONG THE STORM WATER CONVEYANCE CHANNELS AS SHOWN ON THE PLANS. IN AREAS WHERE SEEDING OR HYDROSEEDING OF SLOPES ARE UNSUCCESSFUL, PROVIDE EC-2

14. DUST CONTROL (DC), SPEC. 3.39: PROVIDE DUST CONTROL IN AREAS SUBJECT TO SURFACE AND AIR MOVEMENT OF DUST WHERE ON-SITE AND OFF-SITE DAMAGE IS LIKELY TO OCCUR IF PREVENTIVE MEASURES ARE NOT TAKEN.

B. VEGETATIVE PRACTICES 15. VEGETATIVE STREAMBANK STABILIZATION (VSS), SPEC. 3.22:

16. TOPSOILING (TO), SPEC. 3.30: TOPSOIL WILL BE STRIPPED FROM AREAS TO BE GRADED AND STOCKPILED FOR LATER USE. STOCKPILES ARE TO BE STABILIZED WITH TEMPORARY VEGETATION AND HAVE SILT FENCE INSTALLED ALONG THE LOWER PERIMETER TO PROTECT DOWNSTREAM AREAS.

17. TEMPORARY SEEDING (TS), SPEC. 3.31: TEMPORARY SEEDING SHALL BE PROVIDED ON SITE TO PROVIDE STABILIZATION UNTIL SITE DEVELOPMENT OCCURS. APPLY SEED BASED ON TEMPORARY SEEDING SCHEDULE SHOWN ON THE PLANS. 18. PERMANENT SEEDING (PS), SPEC. 3.32: PERMANENT SEEDING SHALL BE PROVIDED ON SITE TO PROVIDE STABILIZATION FOR ALL DISTURBED AREAS.

APPLY SEED BASED ON TEMPORARY SEEDING SCHEDULE SHOWN ON THE PLANS. 19. SODDING (SO), SPEC. 3.33: 20. MULCHING (MU), SPEC. 3.35: ALL PERMANENT AND TEMPORARY SEEDING SHALL BE STRAW MULCHED IMMEDIATELY UPON COMPLETION OF SEED APPLICATION. STRAW ON STEEP SLOPES SHALL BE ANCHORED UNLESS SEEDING WAS PROVIDED BY MEANS OF A HYDROSEEDING, IN WHICH CASE,

21. TREE PRESERVATION AND PROTECTION (TP), SPEC. 3.38: TREES IDENTIFIED ON THE E&S PLAN SHEET SHALL BE PROTECTED DURING CONSTRUCTION.

C. MINIMUM STANDARDS

PERMANENT OR TEMPORARY SOIL STABILIZATION SHALL BE APPLIED TO DENUDED AREAS WITHIN 7 DAYS AFTER FINAL GRADE IS REACHED ON ANY PORTION OF THE SITE. TEMPORARY SOIL STABILIZATION SHALL BE APPLIED WITHIN 7 DAYS TO DENUDED AREAS THAT MAY NOT BE AT FINAL GRADE, BUT WILL REMAIN DORMANT OR UNDISTURBED FOR LONGER THAN 30 DAYS. PERMANENT STABILIZATION SHALL BE APPLIED TO AREAS THAT ARE TO BE LEFT DORMANT FOR MORE THAN ONE YEAR.

 ${\underline{\sf MS-2.}}$ STABILIZATION OF SOIL STOCKPILES:

DURING CONSTRUCTION OF THE PROJECT, SOIL STOCKPILES AND BORROW AREAS SHALL BE STABILIZED OR PROTECTED WITH SEDIMENT TRAPPING MEASURES. THE APPLICANT IS RESPONSIBLE FOR TEMPORARY PROTECTION AND PERMANENT STABILIZATION OF ALL STOCKPILES ON SITE AS WELL AS BORROW AREAS AND SOIL INTENTIONALLY TRANSPORTED FROM THE PROJECT SITE.

MS-3. PERMANENT VEGETATIVE COVER:

A PERMANENT VEGETATIVE COVER SHALL BE ESTABLISHED ON DENUDED AREAS NOT OTHERWISE PERMANENTLY STABILIZED. PERMANENT VEGETATION SHALL NOT BE CONSIDERED ESTABLISHED UNTIL A GROUND COVER IS ACHIEVED THAT, IN THE OPINION OF THE E&S INSPECTOR, IS UNIFORM AND MATURE ENOUGH TO SURVIVE AND INHIBIT EROSION.

MS-4. TIMING AND STABILIZATION OF SILT TRAPPING MEASURES:

SEDIMENT BASINS AND TRAPS, STORM INLET PROTECTION, SILT FENCING, AND OTHER MEASURES INTENDED TO TRAP SEDIMENT SHALL BE CONSTRUCTED AS A FIRST STEP IN ANY LAND DISTURBING ACTIVITY AND SHALL BE MADE FUNCTIONAL BEFORE UPSLOPE LAND DISTURBANCE TAKES PLACE.

MS-5. STABILIZATION OF EARTHEN STRUCTURES:

STABILIZATION MEASURES SHALL BE APPLIED TO EARTHEN STRUCTURES SUCH AS DAMS, DIKES AND DIVERSIONS IMMEDIATELY AFTER INSTALLATION.

MS-6. SEDIMENT BASINS AND TRAPS:

SEDIMENT TRAPS AND BASINS SHALL BE CONSTRUCTED BASED UPON THE TOTAL DRAINAGE AREA TO BE SERVED. A. THE MINIMUM CAPACITY OF A SEDIMENT TRAP SHALL BE 134-CUBIC YARDS PER ACRE OF DRAINAGE AREA, AND SHALL CONTROL A DRAINAGE AREA OF

B. THE MINIMUM CAPACITY OF A SEDIMENT BASIN SHALL BE 134-CUBIC YARDS PER ACRE OF DRAINAGE AREA, AND SHALL CONTROL A DRAINAGE AREA OF 3-ACRES OR GREATER.

CUT AND FILL SLOPES SHALL BE CONSTRUCTED IN A MANNER THAT WILL MINIMIZE EROSION. SLOPES THAT ARE FOUND TO BE ERODING EXCESSIVELY WITHIN ONE YEAR OF PERMANENT STABILIZATION SHALL BE PROVIDED WITH ADDITIONAL SLOPE STABILIZING MEASURES UNTIL THE PROBLEM IS

MS-8. CONCENTRATED RUNOFF DOWN CUT OR FILL SLOPES: CONCENTRATED RUNOFF SHALL NOT FLOW DOWN CUT OR FILL SLOPES UNLESS CONTAINED WITHIN AN ADEQUATE TEMPORARY OR PERMANENT CHANNEL.

FLUME OR SLOPE DRAIN STRUCTURE.

MS-9. WATER SEEPAGE FROM A SLOPE FACE: WHENEVER WATER SEEPS FROM A SLOPE FACE, ADEQUATE DRAINAGE OR OTHER PROTECTION SHALL BE PROVIDED.

ALL STORM SEWER INLETS THAT ARE MADE OPERABLE DURING CONSTRUCTION SHALL BE PROTECTED SO THAT SEDIMENT-LADEN WATER CANNOT ENTER THE CONVEYANCE SYSTEM WITHOUT FIRST BEING FILTERED OR OTHERWISE TREATED TO REMOVE SEDIMENT.

MS-11. STABILIZATION OF OUTLETS: BEFORE NEWLY CONSTRUCTED STORM WATER CONVEYANCE CHANNELS OR PIPES ARE MADE OPERATIONAL, ADEQUATE OUTLET PROTECTION AND ANY

REQUIRED TEMPORARY OR PERMANENT CHANNEL LINING SHALL BE INSTALLED IN BOTH THE CONVEYANCE CHANNEL AND RECEIVING CHANNEL. WHEN WORK IN A LIVE WATERCOURSE IS PERFORMED, PRECAUTIONS SHALL BE TAKEN TO MINIMIZE ENCROACHMENT, CONTROL SEDIMENT TRANSPORT AND STABILIZE THE WORK AREA TO THE GREATEST EXTENT POSSIBLE DURING CONSTRUCTION. NONERODIBLE MATERIAL SHALL BE USED FOR THE

CONSTRUCTION OF CAUSEWAYS AND COFFERDAMS. EARTHEN FILL MAY BE USED FOR THESE STRUCTURES IF ARMORED BY NONERODIBLE COVER MS-13. CROSSING A LIVE WATERCOURSE

WHEN A LIVE WATERCOURSE MUST BE CROSSED BY CONSTRUCTION VEHICLES MORE THAN TWICE IN ANY SIX MONTH PERIOD, A TEMPORARY VEHICULAR

STREAM CROSSING CONSTRUCTED OF NONERODIBLE MATERIALS SHALL BE PROVIDED.

MS-14. APPLICABLE REGULATIONS:

ALL APPLICABLE FEDERAL, STATE AND LOCAL REGULATIONS PERTAINING TO WORKING IN OR CROSSING LIVE WATERCOURSES SHALL BE MET

MS-15. STABILIZATION OF BED AND BANKS: THE BED AND BANKS OF A WATERCOURSE SHALL BE STABILIZED IMMEDIATELY AFTER WORK IN THE WATERCOURSE IS COMPLETED.

UNDERGROUND UTILITY LINES SHALL BE INSTALLED IN ACCORDANCE WITH THE FOLLOWING STANDARDS, IN ADDITION TO OTHER APPLICABLE CRITERIA: A. NO MORE THAN 500-LINEAR FEET OF TRENCH MAY BE OPENED AT ONE TIME.

B. WHERE CONSISTENT WITH SAFETY AND SPACE CONSIDERATIONS, EXCAVATED MATERIAL IS TO BE PLACED ON THE UPHILL SIDE OF TRENCHES, EXCEPT FOR ANY DIVERSION DITCHES.

C. EFFLUENT FROM DEWATERING OPERATIONS SHALL BE FILTERED OR PASSED THROUGH AN APPROVED SEDIMENT TRAPPING DEVICE, OR BOTH, AND DISCHARGED IN A MANNER THAT DOES NOT ADVERSELY AFFECT FLOWING STREAMS OR OFFSITE PROPERTY.

D. TRENCH BACKFILL MATERIAL SHALL BE PROPERLY COMPACTED IN ORDER TO MINIMIZE EROSION AND PROMOTE STABILIZATION. E. RESTABILIZATION SHALL BE ACCOMPLISHED IN ACCORDANCE WITH THESE REGULATIONS.

F. ALL APPLICABLE SAFETY REGULATIONS SHALL BE COMPLIED WITH AT ALL TIMES.

MS-17. CONSTRUCTION ACCESS ROUTES:

WHERE CONSTRUCTION VEHICLE ACCESS ROUTES INTERSECT PAVED OR PUBLIC ROADS, PROVISIONS SHALL BE MADE TO MINIMIZE THE TRANSPORT OF SEDIMENT BY VEHICULAR TRACKING ONTO THE PAVED SURFACE. WHERE SEDIMENT IS TRANSPORTED ONTO A PAVED OR PUBLIC ROAD, THE ROAD SURFACE SHALL BE CLEANED THOROUGHLY AT THE END OF EACH DAY. SEDIMENT SHALL BE REMOVED BY SHOVELING OR SWEEPING AND TRANSPORTED TO A SEDIMENT DISPOSAL AREA. STREET WASHING SHALL BE ALLOWED ONLY AFTER SEDIMENT IS REMOVED IN THIS MANNER. THIS PROVISION SHALL APPLY TO INDIVIDUAL DEVELOPMENT LOTS AS WELL AS TO LARGER LAND-DISTURBING ACTIVITIES.

MS-18. TEMPORARY E&S CONTROL MEASURE REMOVAL: ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALLS BE REMOVED WITHIN 30 DAYS AFTER FINAL SITE STABILIZATION OR AFTER TEMPORARY

MEASURES ARE NO LONGER NEEDED, UNLESS OTHERWISE AUTHORIZED BY THE LOCAL E&S AUTHORITY. TRAPPED SEDIMENT AND THE DISTURBED SOIL AREAS RESULTING FROM THE DISPOSITION OF TEMPORARY MEASURES SHALL BE PERMANENTLY STABILIZED TO PREVENT FURTHER EROSION AND SEDIMENTATION.

MS-19. ADEQUACY OF RECEIVING CHANNELS:
PROPERTIES AND WATERWAYS DOWNSTREAM FROM THE DEVELOPMENT SITE SHALL BE PROTECTED FROM SEDIMENT DEPOSITION, EROSION AND DAMAGE DUE TO INCREASES IN VOLUME, VELOCITY AND PEAK FLOW RATES OF STORM WATER RUNOFF FOR THE STATED FREQUENCY STORM OF 24-HOUR DURATION.

A. MAINTENANCE: ALL EROSION AND SEDIMENT CONTROL STRUCTURES AND SYSTEMS SHALL BE MAINTAINED, INSPECTED, AND REPAIRED AS NEEDED TO INSURE CONTINUED PERFORMANCE OF THEIR INTENDED FUNCTION. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE CHECKED AT THE END OF EACH DAY AND AFTER EVERY RAINFALL EVENT 1. DAMAGE TO EROSION CONTROL MEASURES CAUSED BY CONSTRUCTION TRAFFIC OR OTHER ACTIVITY SHALL BE REPAIRED BEFORE THE END OF EACH

WORKING DAY 2. MAINTAIN ALL SEEDED AREAS UNTIL A UNIFORM STAND IS ACCEPTED.

3. (SPEC. 3.01) SAFETY FENCE SHALL BE CHECKED REGULARLY FOR DAMAGE. CARE SHALL BE TAKEN TO SECURE ALL ACCESS POINTS AT THE END OF EACH

4. (SPEC. 3.02) PROVIDE FOR EQUIPMENT WASHING AS NEEDED TO PREVENT THE TRANSPORT OF SOIL ONTO EXISTING ASPHALT ROADWAYS. ANY SEDIMENT ON THE PAVEMENT SHALL BE REMOVED IMMEDIATELY. 5. (SPEC. 3.05) SILT FENCE BARRIERS WILL BE CHECKED DAILY FOR UNDERMINING OR DETERIORATION OF THE FABRIC. SEDIMENT SHALL BE REMOVED WHEN

THE LEVEL REACHES HALF WAY TO THE TOP OF THE BARRIER. 6. (SPEC. 3.07) SEDIMENT SHALL BE REMOVED FROM AROUND THE INLET PROTECTION TRAP STRUCTURE AND RESTORED TO ITS ORIGINAL DIMENSIONS WHEN THE SEDIMENT HAS ACCUMULATED TO ONE-HALF THE DESIGN DEPTH OF THE TRAP. THE TRAP STRUCTURES SHALL BE REMOVED AND THE AREA

STABILIZED WHEN THE REMAINING DRAINAGE AREA HAS BEEN PROPERLY STABILIZED. 7. (SPEC. 3.08) AGGREGATE FOR CULVERT INLET PROTECTION, IF OPTIONAL STONE COMBINATION IS USED IN LIEU OF SILT FENCE, SHALL BE REPLACED OR CLEANED WHEN INSPECTION REVEALS THAT CLOGGED VOIDS ARE CAUSING PONDING PROBLEMS WHICH INTERFERE WITH ON-SITE CONSTRUCTION. 8. (SPEC. 3.09 & 3.10) TEMPORARY DIVERSION DIKES AND TEMPORARY FILL DIVERSIONS SHALL BE INSPECTED REGULARLY AND REPAIRS MADE IF NEEDED.

9. (SPEC. 3.12) SEDIMENT ACCUMULATED WITHIN DIVERSIONS SHALL BE REMOVED FROM THE CHANNEL AND REPAIRS MADE AS NECESSARY. 10. (SPEC. 3.13) SEDIMENT SHALL BE REMOVED AND THE TEMPORARY SEDIMENT TRAP RESTORED TO ITS ORIGINAL DIMENSIONS WHEN THE SEDIMENT HAS ACCUMULATED TO ONE-HALF THE DESIGN VOLUME OF THE WET STORAGE. FILTER STONE SHALL BE REGULARLY CHECKED TO ENSURE THAT FILTRATION PERFORMANCE IS MAINTAINED. THE TRAP EMBANKMENTS SHOULD BE CHECKED REGULARLY TO ENSURE THAT IT IS STRUCTURALLY SOUND AND HAS NOT BEEN DAMAGED BY EROSION OR CONSTRUCTION EQUIPMENT. THE HEIGHT OF THE STONE OUTLET SHOULD BE CHECKED TO ENSURE THAT ITS CENTER IS

AT LEAST 1-FOOT BELOW THE TOP OF THE EMBANKMENT. 11. (SPEC. 3.17) THE STORMWATER CONVEYANCE CHANNELS SHALL BE CHECKED PERIODICALLY TO ENSURE THAT SCOUR IS NOT OCCURRING. SEDIMENT DEPOSITED IN CHANNELS SHALL BE REMOVED PRIOR TO THE REMOVAL OF THE TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES, AND DURING CONSTRUCTION WHEN THE CAPACITY OF THE CHANNELS IS REDUCED.

12. (SPEC. 3.18 & 3.19) RIPRAP INSTALLATIONS SHOULD BE INSPECTED PERIODICALLY TO DETERMINE IF HIGH FLOWS HAVE CAUSED SCOUR BENEATH THE

RIPRAP OR GEOTEXTILE FABRIC OR DISLODGED ANY OF THE STONE. 13. (SPEC. 3.21) LEVEL SPREADER LIP MUST REMAIN AT 0% SLOPE TO ALLOW PROPER FUNCTION OF THE MEASURE

14. (SPEC. 3.22) GAPS IN THE VEGETATIVE STREAMBANK STABILIZATION COVER SHOULD BE FIXED AT ONCE WITH NEW PLANTS, AND MULCHED IF NECESSARY. TREES THAT BECOME ESTABLISHED ON THE BANK SHOULD BE REMOVED AT ONCE. 15. (SPEC. 3.23) ALL STRUCTURAL STREAMBANK STABILIZATION STRUCTURES SHOULD BE MAINTAINED IN AN "AS BUILT" CONDITION. STRUCTURAL DAMAGE CAUSED BY STORM EVENTS SHOULD BE REPAIRED AS SOON AS POSSIBLE TO PREVENT FURTHER DAMAGE TO THE STRUCTURE OR EROSION OF THE

16. (SPEC. 3.30) TOPSOIL SHALL NOT BE PLACED WHILE IN A FROZEN OR MUDDY CONDITION, WHEN TOPSOIL OR SUBGRADE IS EXCESSIVELY WET, OR IN A CONDITION THAT MAY OTHERWISE BE DETRIMENTAL TO PROPER GRADING OR PROPOSED SODDING OR SEEDING. THE TOPSOIL SHALL BE UNIFORMLY DISTRIBUTED TO A MINIMUM COMPACTED DEPTH OF 2-INCHES ON 3:1 OR STEEPER SLOPES AND 4-INCHES ON FLATTER SLOPES.

17. (SPEC. 3.31 & 3.32) AREAS WHICH FAIL TO ESTABLISH VEGETATIVE COVER ADEQUATE TO PREVENT RILL EROSION WILL BE RESEEDED AS SOON AS SUCH 18. (SPEC. 3.33) DURING THE 2 TO 3-WEEK ESTABLISHMENT STAGE, SOD SHALL BE WATERED AS NECESSARY TO MAINTAIN ADEQUATE MOISTURE IN THE ROOT ZONE AND PREVENT DORMANCY OF SOD. NO MORE THAN ONE-THIRD OF THE SHOOT (GRASS LEAF) SHOULD BE REMOVED IN ANY MOWING. GRASS

HEIGHT SHOULD BE MAINTAINED BETWEEN 2 AND 3-INCHES UNLESS OTHERWISE SPECIFIED.

19. FERTILIZER MUST BE OF A TYPE IN WHICH 50% OR MORE OF THE NITROGEN IS WATER-INSOLUBLE. 20. (SPEC. 3.35) WHERE EROSION OR WASHOUT IS OBSERVED IN MULCHED AREAS, ADDITIONAL MULCH SHOULD BE APPLIED

21. (SPEC. 3.36) ALL SOIL STABILIZATION BLANKETS AND MATTING SHALL BE INSPECTED AFTER RAINSTORMS TO CHECK FOR EROSION AND UNDERMINING. IF WASHOUT OR BREAKAGE OCCURS, REINSTALL THE MATERIAL AFTER REPAIRING DAMAGE TO THE SLOPE OR DITCH. 22. (SPEC. 3.38) IF THE SOIL HAS BECOME COMPACTED OVER THE ROOT ZONE OF ANY TREE, THE GROUND SHALL BE AERATED BY PUNCHING HOLES WITH AN

IRON BAR. ANY DAMAGE TO THE CROWN, TRUNK, OR ROOT SYSTEM OF ANY TREE RETAINED ON THE SITE SHALL BE REPAIRED IMMEDIATELY. BROADLEAF TREES THAT HAVE BEEN STRESSED OR DAMAGED SHALL RECEIVE A HEAVY APPLICATION OF FERTILIZER TO AID THEIR RECOVERY. 23. (SPEC. 3.39) WATER SHALL BE USED ON DENUDED AREAS THAT CONSTRUCTION VEHICLES TRAVERSE TO MINIMIZE DUST.

VIII. STORMWATER MANAGEMENT

MANAGEMENT OF RUNOFF DURING CONSTRUCTION WILL COMPLY WITH THE EXISTING VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY (DEQ) EROSION AND SEDIMENT CONTROL REGULATIONS. THE CONSTRUCTION PLANS INDICATE ALL ACTIVITIES AND STRATEGIES NECESSARY TO MINIMIZE EROSION AND SEDIMENTATION DURING CONSTRUCTION.

STORMWATER RUNOFF RATES ARE COMPUTED FOR THE 2 AND 10-YEAR STORM EVENTS USING THE RATIONAL METHOD. THESE RUNOFF RATES ARE USED TO DESIGN STORMWATER CONVEYANCE CHANNELS AND PIPES.

DRAINAGE AREA CHARACTERISTICS

HYDRAULIC ANALYSIS

DRAINAGE SUBAREAS FOR THIS PROJECT CONSIST OF A MIXTURE OF WOODED AND PAVED AREAS. A C-FACTOR OF 0.3 IS USED FOR WOODED AREAS, AND A C-FACTOR OF 0.9 IS USED FOR PAVED AREAS. WEIGHTED C-FACTORS AND INCREMENTAL RUNOFF RATES ARE COMPUTED FOR EACH DRAINAGE SUBAREA, AND ACCUMULATED ALONG THE DITCH SEGMENT TO DETERMINE REQUIRED DITCH LINING MATERIALS AND MINIMUM CHANNEL DEPTHS.

TIME OF CONCENTRATION IS DETERMINED USING SCS TR-55 METHODOLOGY. A MINIMUM To OF 5-MINUTES IS USED FOR ALL SMALL SUBAREAS. THE RAINFALL INTENSITY FOR RUNOFF CALCULATIONS USING THE RATIONAL METHOD IS DETERMINED USING THE I-D-F CURVE FOR LYNCHBURG, VIRGINIA. AS PER THE VDOT METHOD, RAINFALL INTENSITY FOR DITCH SEGMENTS AFTER A MINIMUM To OF 5-MINUTES IS ACHIEVED, BEYOND THE INITIAL DITCH SEGMENT, IS THE PREVIOUS DITCH SEGMENT INTENSITY MINUS 0.1-INCHES PER HOUR, UNLESS THE CONTRIBUTING DRAINAGE SUBAREA HAS A GREATER Tc.

ALL PIPES AND CHANNELS ARE DESIGNED TO ACCOMMODATE A 2-YEAR STORM FOR EROSION RESISTANCE, AND A 10-YEAR STORM FOR CAPACITY.

MANAGEMENT OF RUNOFF DURING CONSTRUCTION WILL COMPLY WITH THE EXISTING VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY (DEQ) EROSION AND SEDIMENT CONTROL REGULATIONS. THE CONSTRUCTION PLANS INDICATE ALL ACTIVITIES AND STRATEGIES NECESSARY TO MINIMIZE EROSION AND SEDIMENTATION DURING CONSTRUCTION.

IX. SOIL STOCKPILES AND BORROW AREAS

FILL MATERIAL SHALL BE OBTAINED FROM AREAS OF EXCAVATION ON SITE. LOCATIONS OF SOIL STOCKPILES SHALL BE DETERMINED BY THE CONTRACTOR WITH THE APPROVAL OF THE OWNER/DEVELOPER. ALL STOCKPILES SHALL BE LOCATED ON SITE AND PROTECTED WITH SURROUNDING SILT FENCING AND STABILIZED WITH A VEGETATIVE COVER. THE CONTRACTOR SHALL SUBMIT A SUPPLEMENTARY EROSION AND SEDIMENT CONTROL PLAN FOR ALL SOILS INTENTIONALLY TRANSPORTED OFFSITE IF THE TRANSPORTED MATERIAL DISTURBS MORE THAN 10,000 SQUARE FEET IN AREA.

X. SEQUENCE OF CONSTRUCTION

CONSTRUCT THE TEMPORARY STONE CONSTRUCTION ENTRANCES.

. INSTALL EROSION AND SEDIMENT CONTROL PRACTICES AS IS PRACTICABLE. E. CLEAR THE PLANNED DISTURBED AREA AND REMOVE DEBRIS TO A SUITABLE LOCATION

 INSTALL UTILITIES. INLET AND OUTLET PROTECTION AS IS PRACTICABLE BRING GRADES TO DESIRED ELEVATION.

5. STABILIZE ALL DISTURBED AREAS WITH PERMANENT VEGETATION. APPLY SURFACE TREATMENT AS DESIGNED.

8. EROSION CONTROL DEVICES SHALL REMAIN IN PLACE UNTIL RELEASED BY THE GOVERNING AGENCY REMOVE TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES. 10. STABILIZE AFFECTED AREAS.

XI. CONTACT PARTY FOR E&S IMPLEMENTATION

(TS) TEMPORARY SEEDING SCHEDULE

RATE (LBS/ACRE PLANTING SPECIES SEPT 1 - FEB 15 50/50 MIX OF ANNUAL RYEGRASS (LOLIUM CEREAL (WINTER) RYE (SECALE CERALE) FEB 16 - APR 30 ANNUAL RYEGRASS (LOLIUM MULTI-FLORUM) GERMAN MILLET (SETARIA MAY 1 - AUG 31

PS) PERMANENT SEEDING SCHEDULE

SITE SPECIFIC SEEDING MIXTURES FOR PIEDMONT AREA

ITALICA)

TOTAL POUNDS PER ACRE INIMUM LAWN CARE (COMMERCIAL OR 175-200 LBS KENTUCKY 31 OR TURF-TYPE TALL FESCUE 95-100% IMPROVED PERENNIAL RYEGRASS 0-5% KENTUCKY BLUEGRASS 0-5% HIGH MAINTENANCE LAWN CARE 200-250 LBS KENTUCKY 31 OR TURF-TYPE TALL FESCUE 100% **GENERAL SLOPE (3:1 OR LESS) KENTUCKY 31 FESCUE** 128 LBS RED TOP GRASS 2 LBS SEASONAL NURSE CROP 20 LBS 150 LBS LOW MAINTENANCE SLOPE (STEEPER THAN 3:1 **KENTUCKY 31 FESCUE** 108 LBS RED TOP GRASS 2 LBS SEASONAL NURSE CROP* 20 LBS

*USE SEASONAL NURSE CROP IN ACCORDANCE WITH SEEDING DATES AS STATED BELOW:

FEBRUARY 16TH THROUGH APRIL MAY 1ST THROUGH AUGUST 15TH FOXTAIL MILLET: ANNUAL RYE: AUGUST 16TH THROUGH OCTOBER NOVEMBER THROUGH FEBRUARY 15TH

**SUBSTITUTE SERICEA LESPEDEZA FOR CROWNVETCH EAST OF FARMVILLE, VA (MAY THROUGH SEPTEMBER USE HULLED SERICEA, ALL OTHER PERIODS, USE UNHULLED SERICEA). IF FLATPEA IS USED IN LIEU OF CROWNVETCH, INCREASE RATE TO 30 LBS/AC. ALL LEGUME SEED MUST BE PROPERLY INOCULATED. WEEPING LOVEGRASS MAY BE ADDED TO ANY SLOPE OR LOW-MAINTENANCE MIX DURING WARMER SEEDING PERIODS; ADD 10-20 LBS/AC IN MIXES.

LIME & FERTILIZER SPECIFICATIONS:

A SOILS TEST IS REQUIRED PRIOR TO FINAL SITE STABILIZATION, TO DETERMINE LIME AND FERTILIZER APPLICATION RATES FOR THE ESTABLISHMENT OF GRASS ON SITE. CONTACT VIRGINIA COOPERATIVE EXTENSION OR A GEOTECHNICAL FIRM WITH SOIL TESTING FACILITIES TO OBTAIN A SOILS REPORT FOR NUTRIENT APPLICATION.

LIME AND FERTILIZER SHALL BE INCORPORATED INTO THE TOP 4 INCHES OF TOPSOIL BY DISCING OR OTHER

MEANS WHENEVER POSSIBLE. FOR EROSION CONTROL, WHEN APPLYING LIME AND FERTILIZER WITH A

HYDROSEEDER, APPLY TO A ROUGH, LOOSE SURFACE.

<u>WOLCHING.</u> MULCH WITH STRAW AT A RATE OF 2 TONS/ACRE OR EQUIVALENT.

Viley | Wilson

COMM NO: 214034 DATE: 5/2/2014 DRAWN: DGB | DESIGN: DGB

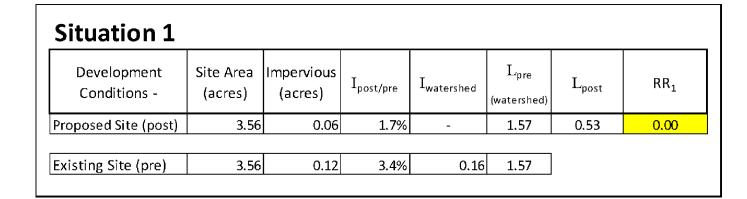
SHEET TITLE **EROSION &**

SEDIMENT CONTROL

NARRATIVE

C-401

CHECK: DTS



DESCRIPTION	ADEA /ACDE)	To (N/INI)	10-YR PEAK
	AREA (ACRE)	Tc (MIN)	FLOW (CFS)
PRE LOI-1	4.4	7.5	5
POS⊤ LOI-1	4.4	7.5	5

DESCRIPTION	CHANNEL DEPTH (FT)	CHANNEL SLOPE	25-YR STORM EVENT		
			Q (CFS)	FLOW	VELOCI7
				DEPTH (FT)	(FT/S)
CH-1	0.6	1.1%	1.1	0.5	1.3
CH-2	0.6	1.2%	0.4	0.4	1.0
CH-3	0.6	1.2%	0.8	0.5	1.2
CH-4	0.6	1.1%	0.8	0.5	1.2
CH-5	0.6	1.2%	0.8	0.5	1.2



IF THIS DRAWING IS REDUCED, GRAPHIC SCALE MUST BE USED.

C-501

STORMWATER MANAGEMENT SUMMARY

DRAWN: DGB DESIGN: DGB

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DATE: 5/2/2014

CHECK: DTS SHEET TITLE

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